



Engineered Pulley Solutions for Global Mining

Custom designed. FEA verified. Built to last.

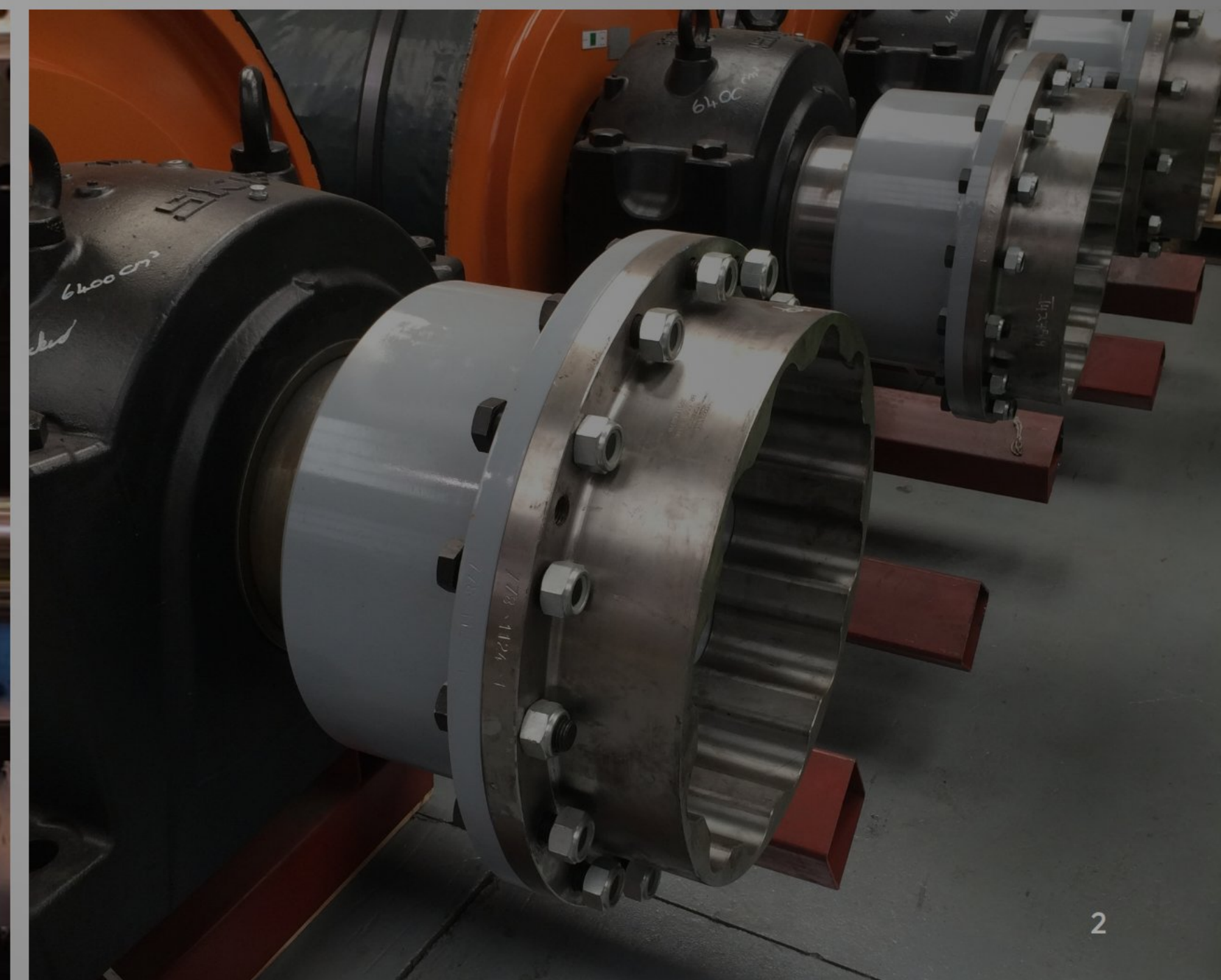




WHAT WE OFFER

Heavy-Duty Conveyor Pulleys Engineered, Manufactured & Delivered Worldwide

Lowest total cost of ownership through precision engineering, quality materials, and full traceability from raw material to final dispatch.

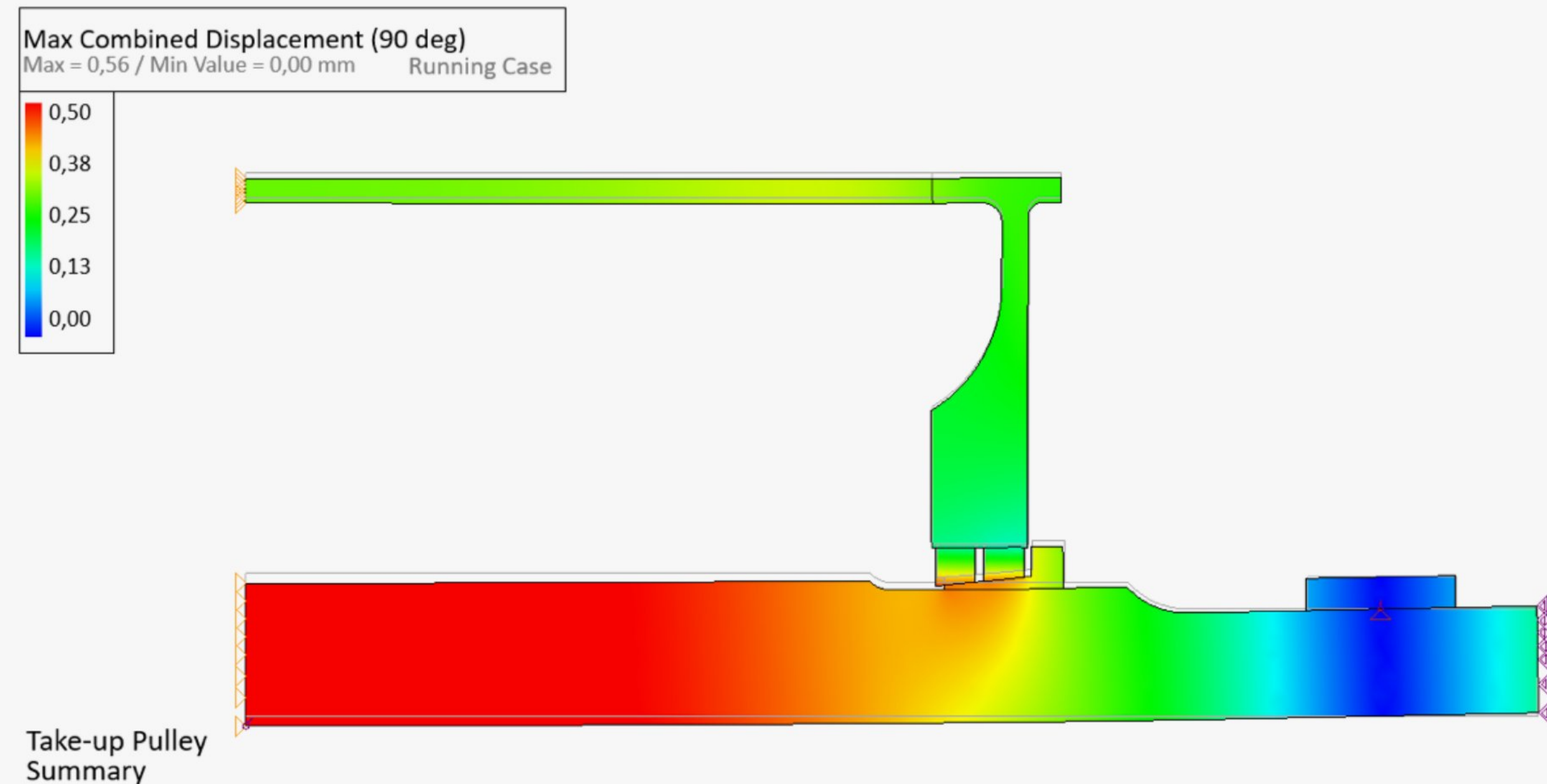
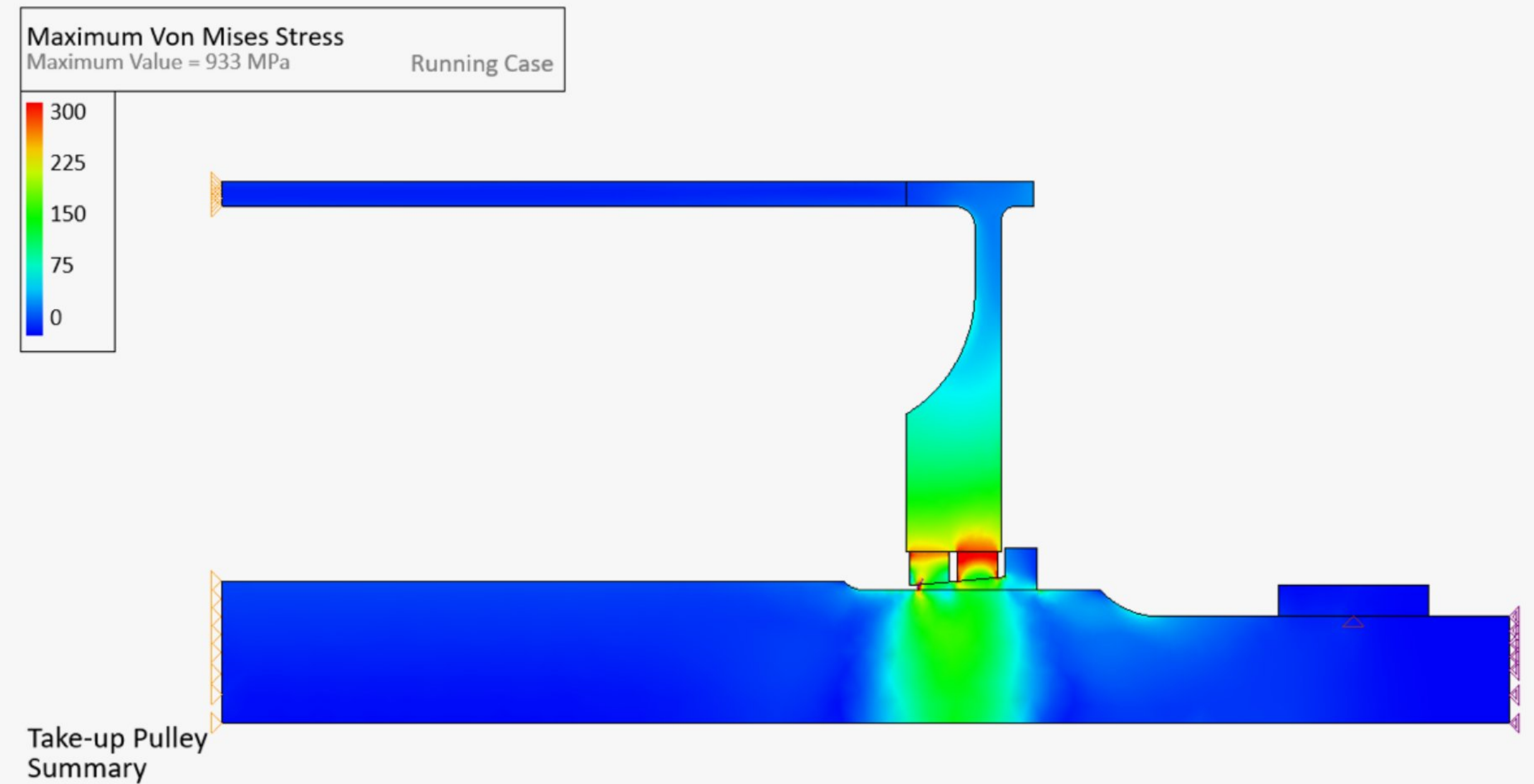


ENGINEERING

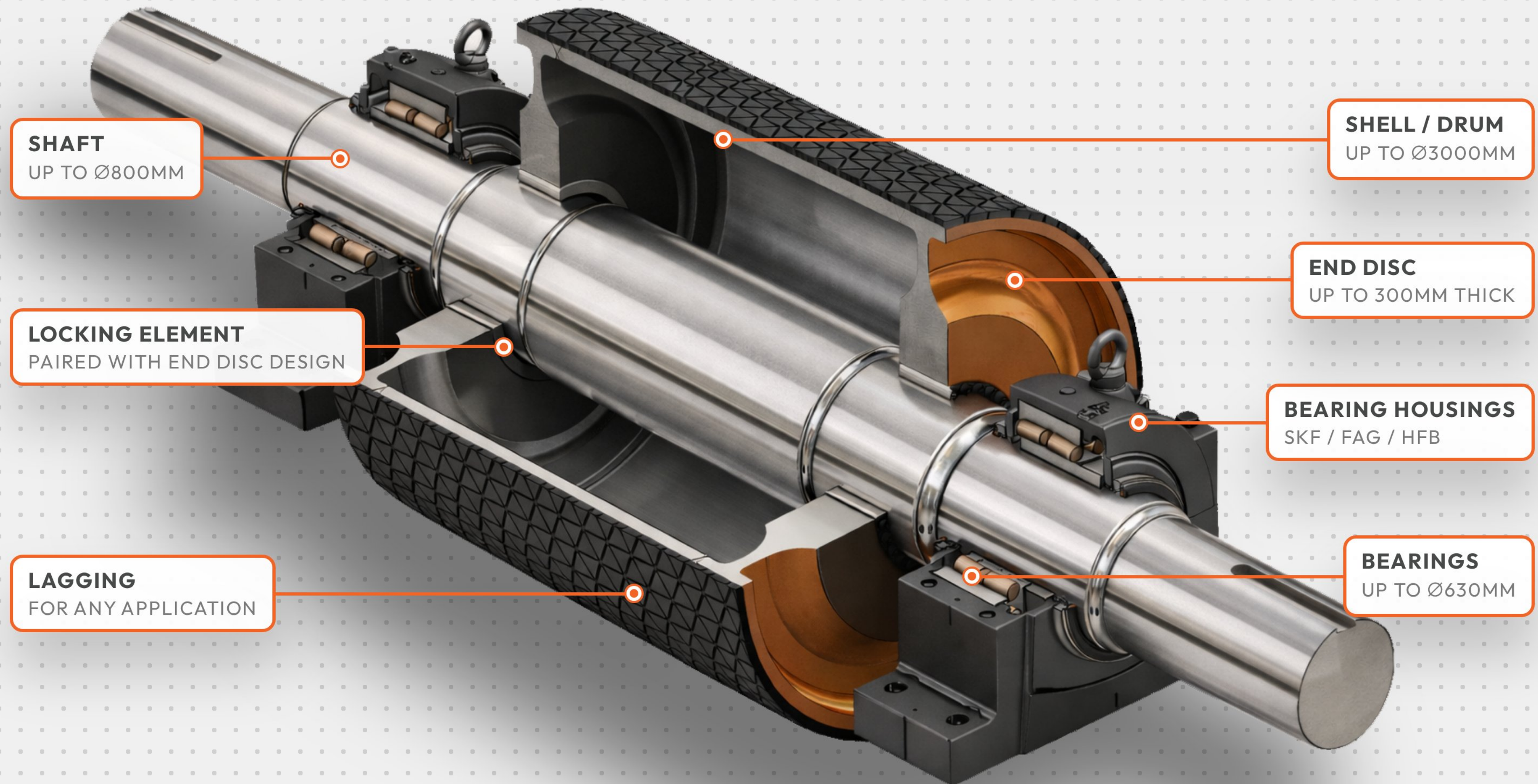
Every Pulley Custom Engineered for Duty

- Finite Element Analysis (FEA) performed on every design
- Load-case specific engineering for real operating conditions
- Optimised for torque, bending moment, and fatigue life
- Standardisation as required to reduce spares capital

By designing each pulley for its specific use case, Lorbrand ensures peak conveyor performance and reliability.



Anatomy of a Lorbrand Pulley



COMPONENTS

Shell Construction

Material selection based on duty requirement and project specification.

MATERIALS

- ASTM A106 Gr.B Seamless Pipe
- ST52 Hollow Bar
- EN 10025-2 S355JR Plate
- Stainless Steel 304 / 304L
- Stainless Steel 316 / 316L

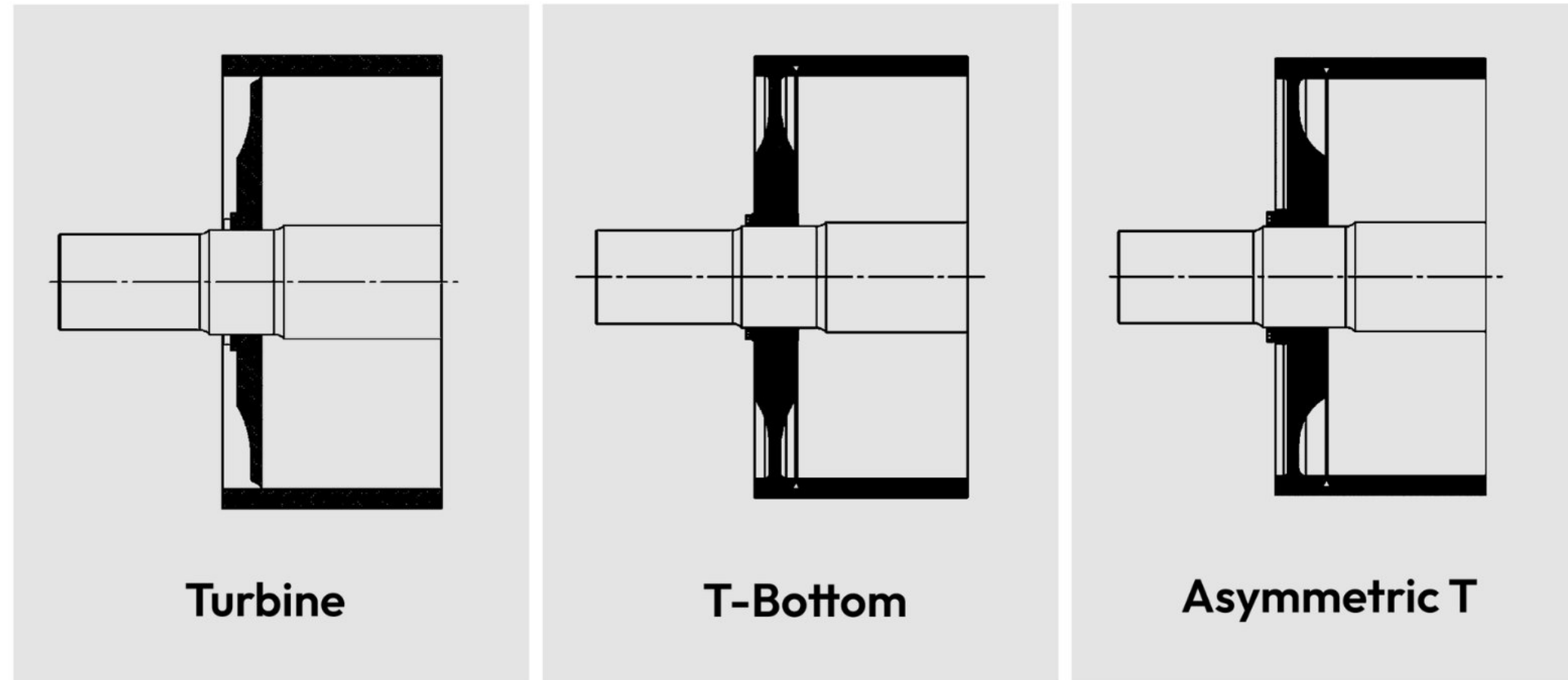
Plate rolling up to 80mm thickness

Diameters up to Ø3000mm

Custom imports for large face widths



End Discs & Shafts



Heavy-Duty End Discs

- EN 10025-2 S355J2+N
- Stainless Steel 304 / 316
- Custom step-forgings
- Thickness up to 300mm
- Optimised hub-to-shell transition geometry
- Fatigue-critical weld design

Designed for torque + bending interaction — not torque alone.



CNC-Machined Shafts — Up to Ø800mm

- EN3A / S45C / AISI 4140 / AISI 4340
- BS970 826M40 (EN26 Q&T)
- Custom step-forgings available
- Lengths up to 7000mm

Testing: Hardness (ASTM E10), Tensile (ASTM E8), Charpy Impact (ASTM E23), Chemical Composition (ASTM E415), Grain Size (ASTM E112)



COMPONENTS

Bearings, Housings & Locking Elements

GLOBAL BEARING BRANDS

- SKF, FAG, Timken, HFB
- Up to Ø630mm bearings (larger on request)

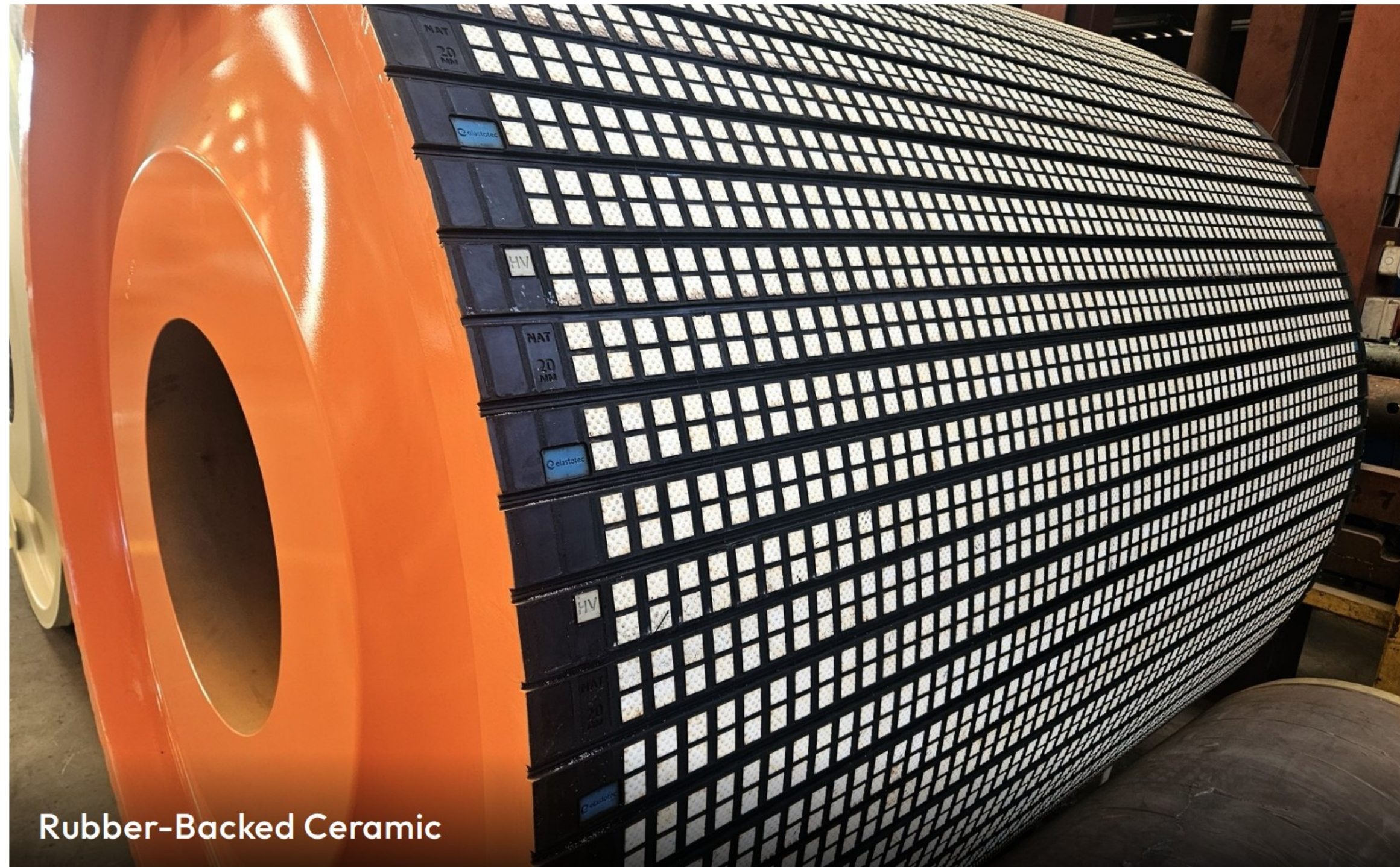
HOUSING TYPES

- SNL / SAF / THDD / STL series
- Custom take-up housings
- 2-bolt and 4-bolt configurations
- Labyrinth, taconite, and grease purging seals

LOCKING ELEMENTS

- Ringspann RLK TC / Ringfeder RfN / Bikon B-Loc
- Up to Ø700mm locking elements
- Selected for torque and bending capacity requirements

Lagging Engineered for Traction & Wear



Rubber-Backed Ceramic



Direct Bond Ceramic

LAGGING TYPES

- Cold bonded / Hot vulcanised
- Plain / Diamond / Chevron / Herringbone
- Rubber-backed ceramic / Direct bond ceramic

MATERIALS

- Natural Rubber (NR)
- Styrene Butadiene (SBR)
- Polyurethane (PU)
- FRAS options available

PERFORMANCE FOCUS

- Shore hardness
- Abrasion resistance
- Tensile strength
- Wet traction performance

MANUFACTURING

Heavy-Duty Manufacturing Infrastructure

In-house raw material preparation, CNC milling & turning, flame cutting up to 200mm, and shell rolling capability.

3000mm

PULLEY DIAMETER

80mm

SHELL THICKNESS

800mm

SHAFT DIAMETER

7000mm

SHAFT LENGTH

PROCESS

Welding & Post-Weld Heat Treatment

Designed for fatigue performance in high-duty mining conveyors.

CERTIFIED WELDING PROCEDURES

- BS EN ISO 15609-1:2019 & AWS D1.1
- Processes: GMAW, FCAW, SAW

NON-DESTRUCTIVE TESTING

- Magnetic Particle Testing (MPT) per ASME VIII Div 1
- Ultrasonic Testing (UT) per ASME VIII Div 1
- X-Ray Radiography per ASME VIII Div 1

POST-WELD HEAT TREATMENT

- PWHT per ASME VIII Div 1
- Full thermal cycle documentation



QUALITY

Quality Assurance & Documentation

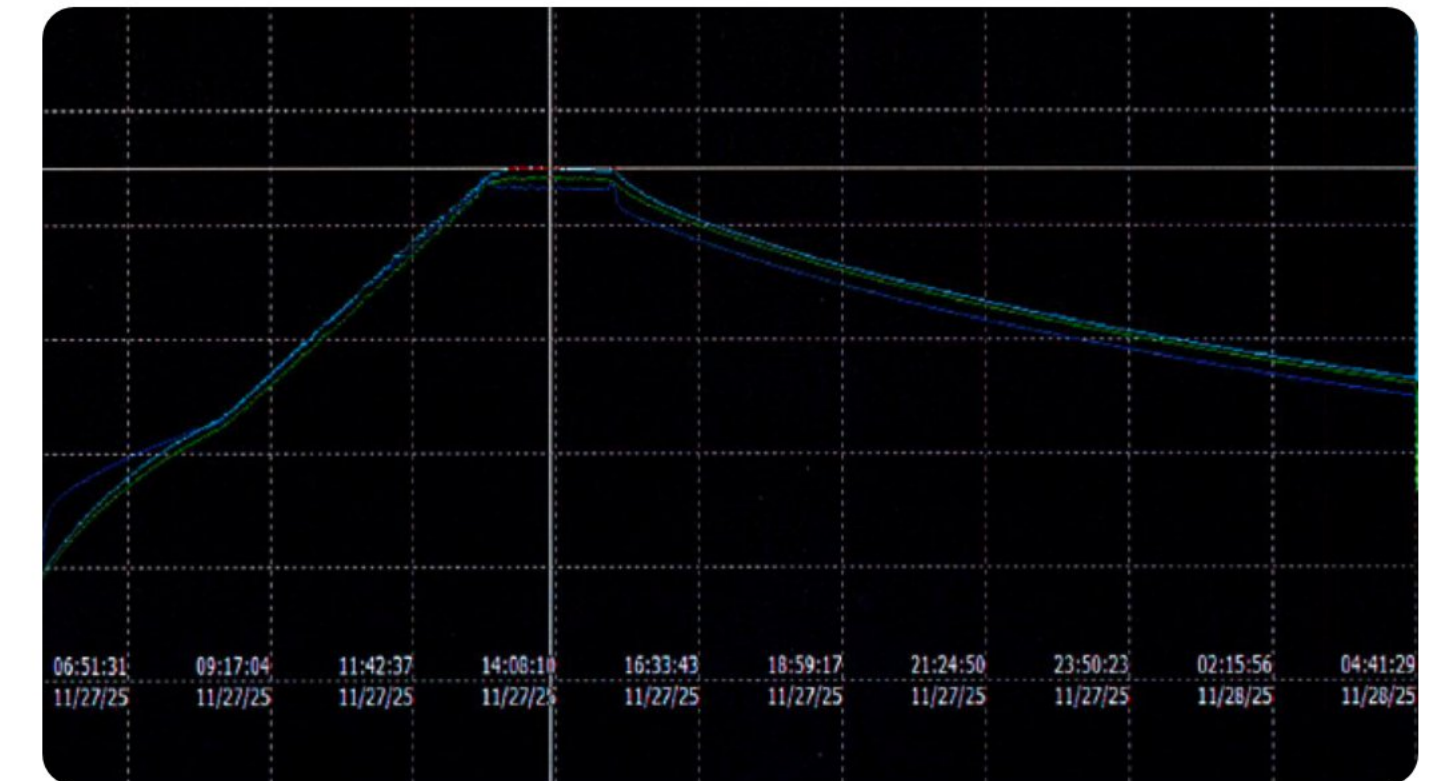
Every pulley leaves our facility with comprehensive documentation ensuring full traceability and compliance.

INSPECTION & TESTING

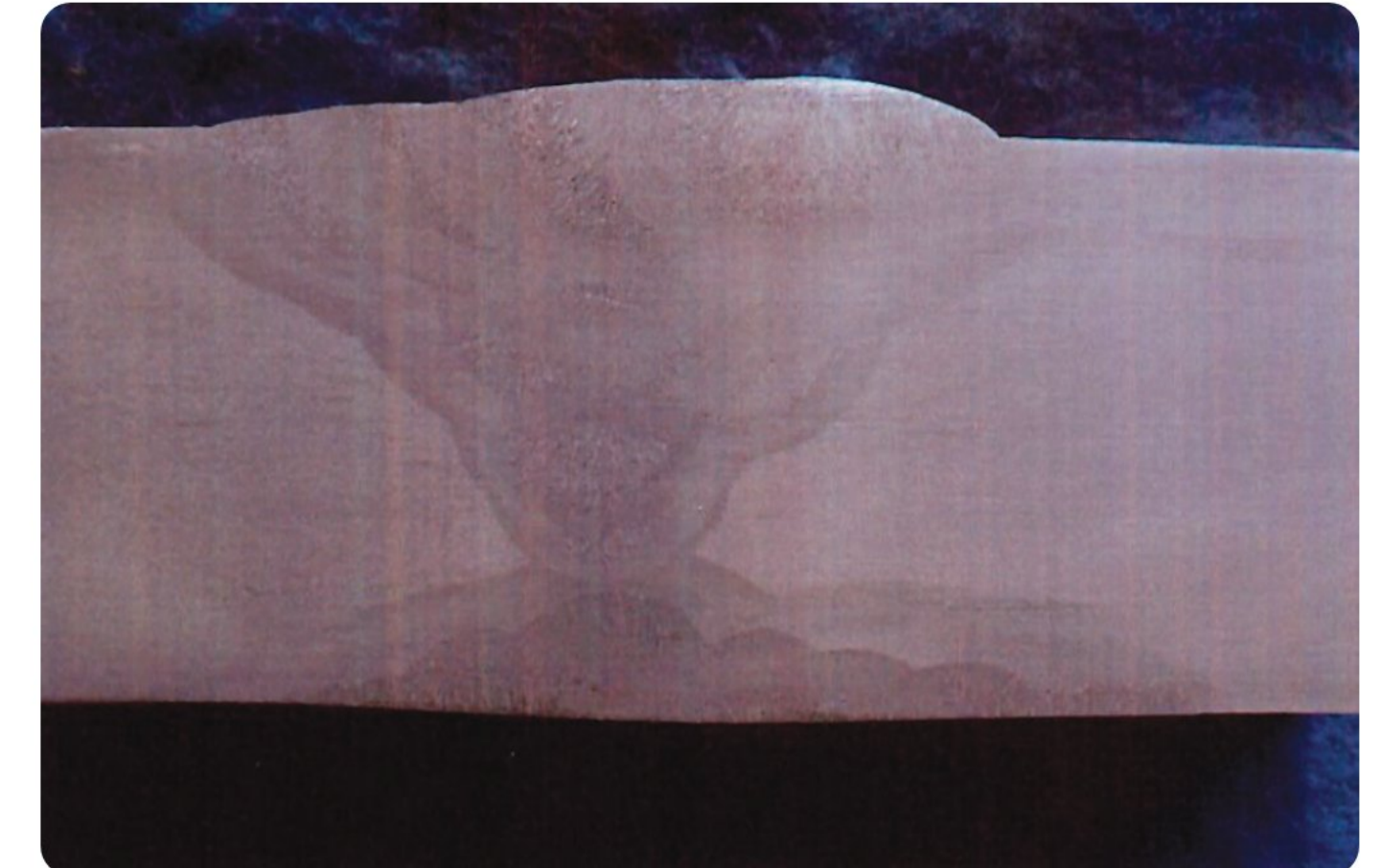
- Controlled Inspection & Test Plans (ITP) with hold points
- Dimensional inspection at all critical stages
- Static & dynamic balancing to ISO 21940-11 Grade G 40
- Locking element tightening torque control
- Bearing installation per manufacturer best practice

DOCUMENTATION & PROTECTION

- Full Manufacturer's Data Report (MDR) with every order
- NDT reports, balancing certificates, material certificates
- Corrosion protection systems aligned to ISO 19244
- Mining & coastal specification compliance



Post-Weld Heat Treatment Plot



Weld Macro Cross Section

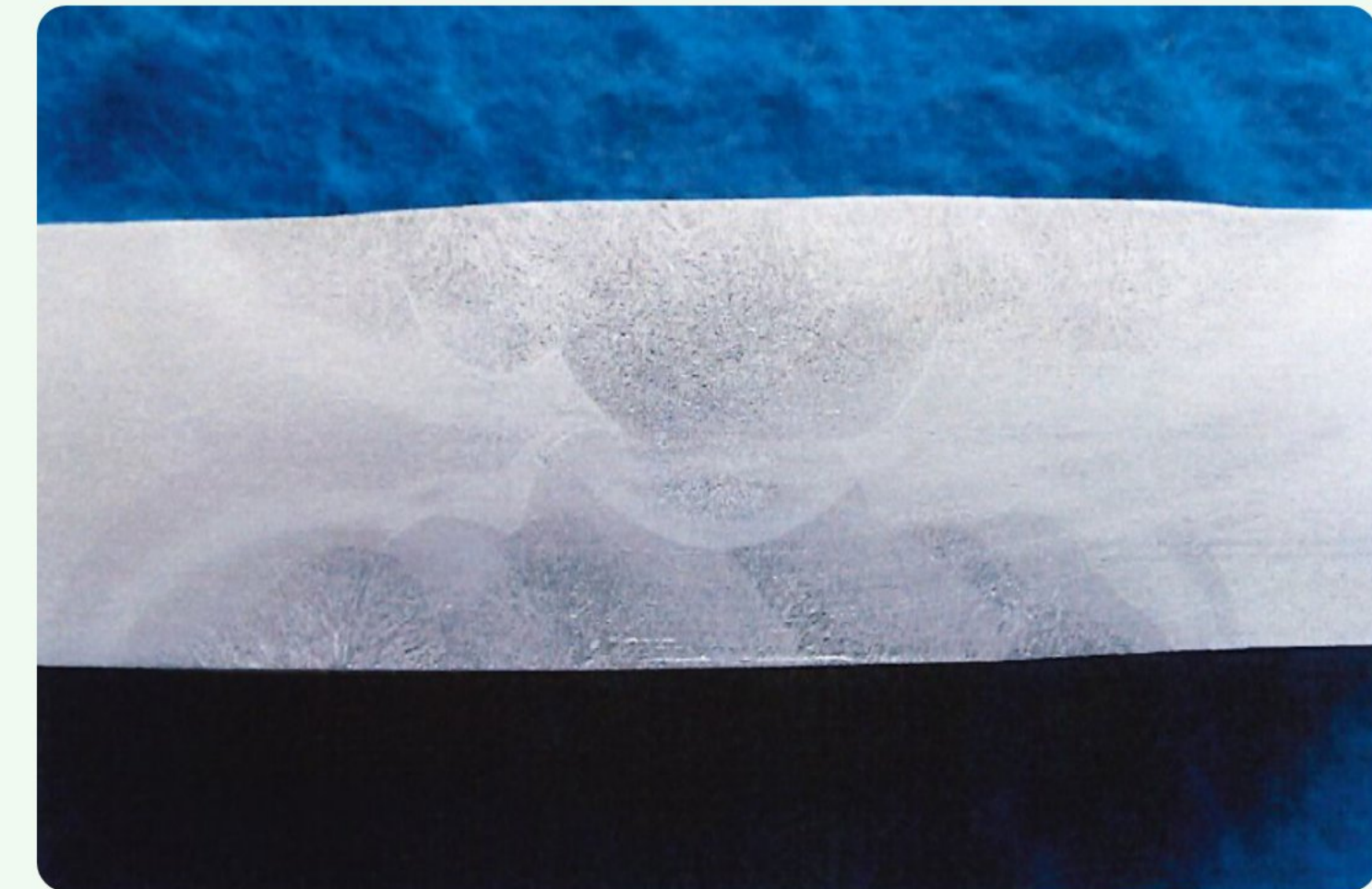
The Lorbrand Difference

Why FEA-verified, fatigue-designed pulleys are critical for mining operations.



Common Industry Failure

Turbine-type end disc weld failure caused by inadequate fatigue design. Under-engineered weld geometry leads to catastrophic failure and unplanned downtime.



Lorbrand Engineering Standard

Optimised weld geometry with full penetration. Every critical weld is designed for fatigue, tested via NDT, and documented in the Manufacturer's Data Report.

LOGISTICS

Global Export Capability

Pulleys delivered worldwide with engineering-grade packaging and load securing.

- Seaworthy packaging to international standards
- CTU Code compliant load securing
- Engineered restraint and lashing systems
- Exposed surface protection for transit
- Container and flat-rack loading capability
- International technical support

Delivered to 20+ countries across South America, Africa, Asia-Pacific, and beyond.



TRACK RECORD

Trusted by Mining Leaders Worldwide



45+ major customers across 20+ countries

SOUTH AMERICA

Alto Norte Chile	Southern Peru Copper Peru
Andina Chile	Spence Chile
Antofagasta PLC Chile	SQM Chile
Barrick Peru	Toquepala Peru
BHP Chile	Vale Brazil
Codelco Chile	Alumbrera Argentina
Collahuasi Chile	Gualcamayo Argentina
Escondida Chile	YCRT Argentina
Glencore Peru, Chile	Pirquitas Argentina
Pelambres Chile	Exar Argentina
Puerto Ventanas Chile	CEFAS Argentina
Quellaveco Peru	YPF Argentina
Sal Lobos Chile	NRG Argentina
Sierra Gorda Chile	Copetro Argentina
Sincor Venezuela	Holcim Argentina

AFRICA

Barrick Tanzania
BHP South Africa
Catoca Angola
CBG Guinea
Eskom South Africa
Exxaro South Africa
Glencore South Africa
Port of Matola Mozambique
Sasol Coal South Africa
Tenke DRC
Vedanta South Africa

ASIA-PACIFIC & OTHER

Adaro Indonesia
FMG Australia
Karara Australia
Grupo Mexico Mexico
Peñasquito Mexico



Grain Wing Herringbone Pulleys



Custom Take-Up Housings



Drive Coupling Configuration



Large Feeder Pulley



Precision Parts



Seals and Bearing Housing Components



Engineered Reliability

Custom designed pulley solutions for the world's most demanding mining operations.

EMAIL

info@lorbrand.com

PHONE

+27 12 66 66 000

WEB

www.lorbrand.com

